DOCUMENT RESUME

ED 190 217 PS 011 551

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TITLE Moral Development in Montessori and Traditional Preschool Children: Does School Type Make a Difference?
PUB DATE [79]
NOTE 20p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Altruism; Comparative Analysis; *Educational Environment; Intelligence; Justice; *Moral Development; *Nontraditional Education; Perspective Taking; *Preschool Children; *Preschool Education; *Traditional Schools
IDENTIFIERS *Montessori Preschools

ABSTRACT

This study investigates the moral development of thirty 5-year-old children in Montessori and traditional preschools. Data for the study were derived from five sources: an intelligence test; a perspective taking task; an altruism/helping task; an altruism/sharing task; and an interview for exploring moral reasoning. Two 30 to 45 minute sessions were used for data gathering. Comparisons were made between school type and across the total sample in regard to altruistic behavior, specifically helping and sharing; moral judgement, specifically positive justice reasoning; and cognitive perspective taking. Positive justice reasoning and altruistic behavior were not found to be affected by exposure to a Montessori or traditional school environment. Rather, results indicated that developmental influences alone determined reasoning and behavior, thus confirming developmental theories of moral growth, and suggesting as well that direct intervention or teaching may be more effective than environment in spurring moral growth. (Author/RH)

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MORAL DEVELOPMENT IN MONTESSORI AND TRADITIONAL PRESCHOOL CHILDREN: DOES SCHOOL TYPE MAKE A DIFFERENCE?

Suzanne Lowell Krogh

The case for moral thought and behavior as a natural component of child development has been argued and researched frequently in recent years. Less frequently considered has been the effect of classroom style on children's moral development. The purpose of this study was to determine whether children in a Montessori setting would respond to moral dilemmas, both actual and theoretical, any differently than children in a traditional nursery school.

The belief that cognitive development underlies all growth in childhood morality is common to the theories of Montessori, Piaget, and Kohlberg. Montessori believed that satisfying children's intellectual needs contributes to their moral development as well. She argued that when children are able to occupy themselves independently and freely with "intelligent work" then, "amenity in their relations to each other (springs) up like a jet of water from an internal fount" (5). Her focus on individualism and independence has meant that in Montessori preschools, children have been left free to form naturally their own concept of a community. Thus, moral thought and behavior are not taught by direct intervention, but through the children's natural interaction with the environment and with each other.

While Montessori chose to focus on the educational implications of development, Piaget (7) was concerned with develop-

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ing a theory of linear stages of cognitive development, and a related, but more broadly defined, theory of social and moral development. He argued that children cannot be expected to behave at a moral stage much beyond that which they have achieved cognitively. A cognitively egocentric preschool child, for example, may only be able to see her own point of view on a perceptual task such as setting a table for herself and a friend. The child may well place the opposing utensils facing the same direction: hers. This same child, in making a moral decision, would also be able to see only her point of view. In placing food on the table she might justify giving herself more because it is her favorite. Although Piaget observed a concomitant development of cognition and morality, it is Kohlberg (4) who has refined the structure of moral development theory and applied it to the classroom.

Kohlberg's Piaget-based theory of moral development, and his application of it to education, are in harmony with Montessori's beliefs. Kohlberg, like Montessori, has argued that classroom environment and structure can supplement and enhance natural moral development. However, he believes that intervention techniques are needed as well. While Kohlberg's work has been with older students, Selman(10) has applied his intervention techniques to the elementary classroom. He has been concerned specifically with perspective taking abilities, as in the table setting example. According to both Piaget and Kohlberg, the moral judgment of preschool children is hindered by their inability to take the perspective of others. Some

elementary age children may also be lacking in this ability. Selman's research supports perspective taking as a necessary component of moral development in young children that may be enhanced by classroom intervention.

Damon (1) has concluded from his research with children under the age of ten, that the development of real-life moral reasoning and hypothetical judgment progress in an age-related manner, although they may not always be related to each other. Like Piaget and Kohlberg, Damon used clinical interviews to establish age-based sequential levels of moral development. His research supports previous arguments that the ego-centered concerns of the youngest children hamper their ability to take another's perspective. Unlike Montessori, Kohlberg, and Selman, Damon has not applied theory to classroom practices.

The "Just Communities" that Kohlberg has instituted in some schools are somewhat related to the less sophisticated communities of Montessori classrooms. Both emphasize a democratic approach, with students participating to the degree their maturity allows. Teachers in either remain in the background when possible, but also make a strong advocacy stand when necessary. In both instances the teacher works toward an awareness of each student's stage of cognitive and moral development and tries to encourage the child to move independently to a slightly higher step. Finally, a close look at Kohlberg's Level I, Stage 2 (Individualism, Instrumental Purpose, and Exchange) indicates a parallel with Montessori's concept of the

community or "society-in-embryo" which she sanctioned for her classrooms. The primary difference between the two, in addition to the focus on different age groups, is the emphasis on the environment in the Montessori classroom to the exclusion of the intervention found in Kohlberg's "communities."

While Kohlberg and others have developed specific techniques for urging students to higher levels of moral thought, these techniques have not been viewed as appropriate for very small children. Thus far, research with preschool children has been mostly limited to observation, and, in Damon's case, to the development of a theory of early moral growth. The question then remains: Is Montessori correct in arguing that a classroom environment based on individual freedom will promote greater moral growth than a child might attain in another setting? Is the environment, in fact, a strong enough influence, or is direct intervention necessary to enhance moral development? Because altruism, specifically helping and sharing, has been a central concern within the Montessori classroom, these characteristics were selected as the focus of this study.

The differences in helping behaviors, sharing behaviors, moral reasoning and perspective taking in Montessori five-year-olds and five-year-olds in traditional preschools were observed. In addition, the interaction between the same four variables across the total population was observed in order to determine if differences among children were developmental, school-influenced, or both.

METHOD

Subjects

The thirty five-year-olds participating in this study were selected on a random basis from six classrooms in a total of four schools. There were thirteen white females and seventeen white males. All the children had attended school at least one year, and most had attended two years or three. In addition, thirty four-year-olds were used as confederates in the design, but not in the evaluation. Each four-year-old was paired with a subject in such a way that the relationships were as neutral as possible. In other words, no very close friends or habitual antagonists were paired with each other. Socioeconomic status was mixed, ranging from children attending school on scholarship to upper-middle class children; this variable, however, was not controlled.

Three classrooms were Montessori and three traditional. The criteria for selection of the Montessori schools was adherence to the philosophies of Montessori as taught by the Association Montessori Internationale. (The author is a graduate of this program.) In selecting the traditional schools, the criterion was the existence of program components that matched those in the Montessori classrooms, as well as those that were quite different. Such components as heterogeneous age grouping, all-day programs for five-year-olds and cognitive instruction were matched, for the reason that these aspects of the Montessori program are frequently found in traditional

schools as well. Components that differed included: frequent whole-class activities, emphasis on group work and group games, group or whole-class projects in helping and/or sharing, and materials in abundance, or at least sufficient for whole-class participation. Montessori schools had few, if any, whole-class activities, no emphasis on group work or games, no specific training in helping or sharing, and a purposeful limitation of materials so that the environment would then be responsible for teaching children to develop sharing and helping behaviors on their own.

Procedure

Data for the study were derived from five sources: an intelligence test; a perspective taking task; an altruism/helping task; an altruism/sharing task; and an interview for exploring moral reasoning. Two 30 to 45 minute sessions were used for data gathering. The intelligence test and perspective taking task were administered during the first session, the two altruism tasks and interview during the second. A description of the five data sources follows:

The intelligence test:

Four subtests of the Wechsler Preschool and Primary Scales of Intelligence were administered to all subjects. These four were chosen because, for five-year-olds, they have the highest multiple correlation with the total scores, because they sample broadly across the structure of the test, and because they

require less administrative time than does the full scale. This last consideration was thought important due to the length of time required to administer the other tasks and possible subsequent fatigue of subjects. The four subtests were: Mazes, Information, Arithmetic, and Picture Completion.

The perspective taking task:

The purpose of this task was to assess the perspective taking abilities of the subjects and was based on the Glucksberg and Krauss (2) "communicative egocentrism task" as adapted by Rubin and Schneider (9). The task requires that two persons communicate with one another about novel, low-encodable, graphic designs. The experimenter and the subject sit opposite each other, separated by a screen. Both have identical sets of ten nonsense figures drawn on 5 x 7 inch cards. The object is to match as many of the cards as possible, based on the subject's description. In this study, the Rubin and Schneider task was followed exactly, except that each child had six, rather than ten cards to describe. The reason for this was that Rubin and Schneider worked with seven-year-olds, while this study concerned five-year-olds who fatigued more quickly.

The altruism/helping task:

This task involved the following adaptation of a procedure developed by Rubin and Schneider (9). At the beginning of the second session, the subject and

a four-year-old of the same sex were brought into the testing room. (In each case, the room chosen was adjacent to the classroom and familiar to the subjects.) The investigator showed the children some new toys and informed them that they might play with the toys upon completion of a simple task. The subject and the younger child were seated at opposite sides of a small table on which were two stacks of tickets and a box. The investigator stated:

> Do you see these tickets? They are from a show we are putting on. We need to stack the tickets into small piles of three tickets each. Now this is your pile (to subject) and this is your pile (to younger child). Before you play with the toys take your tickets and put them into piles of three. Then put a large paper clip on them and place them in this small box. When you are finished with your tickets you may play with the toys.

The number of tickets in the subject's pile (N=18) was half the number in the younger child's pile (N=36). Because the subject had fewer tickets he or she finished the task before the younger child, and thus could choose between helping the younger child or playing with the toys. Originally, the intent was to score ticket piles completed by the subject, as Rubin and Schneider had done. Ultimately, however, subjects were scored merely on the basis of volunteering help. This decision was based on observation of varying abilities at manipulation both in the subjects and in the confederates.

The altruism/sharing task:

This task was also an adaptation of the procedure

followed by Rubin and Schneider. The activity came about ten minutes after the children began playing with the toys. The author instructed the younger child to return to the classroom, and then said to the subject, "You've been very helpful. I would like to give you something for all your work." The child was then given a choice of six bags of potato chips or six bags of a related snack in order to ensure their value to the subject. The author waited to see if the child would note that the four-year-old had received no reward. (This portion of the session was tape recorded.) If the child made no comment the author would ask, "Would you like to share any of those with the other helper? How many will you give him/her? Why did you choose that number to share?" The number of packages shared with the four-year-old partner was a measure of altruism. The reasoning given by the child following this task was not formally scored, but used as an elaboration of the reasoning given during the previous session and to better understand the relationship of each child's reasoning to behavior. Each child was offered an even number of packages for sharing, rather than the unequal number usually associated with this type of research activity. Because Damon observed that the reasoning of children this age is largely based on the principle of equality, it was believed this approach would best elicit that reasoning.

The moral judgment interview:

This interview deals with positive justice reasoning and was adapted from one used by Damon (1) to establish his theory of distinct levels of reasoning. The interview contains a story which directly relates to the sharing behaviors observed in the children in this study. Questions were added to the interview to elicit reasoning about helping behaviors. The story concerns a class of children who spend the day drawing and painting pictures. The teacher suggests that they sell the pictures at the fair. After a successful day of sales the children are faced with decisions about the division of the money. Interview questions elicit reasoning concerning equality and other considerations, such as fair distribution to poor children or to those who worked harder or not at all. Attitudes toward authority also are probed as the children are asked to determine the teacher's fair share. Each subject was given an opportunity to respond to all the questions. The order sometimes varied dependent on the needs of each child. Answers then were analyzed to identify each child's level of positive justice reasoning.

RESULTS

Preliminary Analyses

A two-way analysis of variance showed the Montessori subjects to have IQ scores that were significantly higher than those of

the traditional subjects. Female subjects, across both school types, also scored significantly higher. The F-ratio was significant at the .05 level for both sex and school type. It was concluded that intelligence could be a factor influencing the results. Pearson correlation coefficients or point biserial coefficients were computed between IQ and all other variables with the only significant relationship observed between IQ and positive justice reasoning ($r_{pb} = .57$, $p < .01$). It was, however, not feasible to partial IQ out of positive justice reasoning, as the latter was not analyzed by scoring procedures. Male and female scores on all other variables were also compared and no significant differences which could be attributed to sex were found.

Montessori/Traditional Observations

Chi-squares were computed between subjects in the two types of schools and perspective taking abilities, helping behaviors, sharing behaviors and positive justice reasoning. Table 1 shows the results of these analyses.

Table 1. Comparison of Montessori and Traditional Students on Four Variables

Perspective taking	Helping	Sharing	Positive Justice Reasoning
$X^2 = .319$	$X^2 = .159$	$X^2 = .14$	$X^2 = .195$

As table 1 shows, no significant differences were found

between children in the two types of schools in perspective taking abilities, helping and sharing behaviors, and positive justice reasoning.

Developmental Observations

Using point-biserial coefficients, relationships were analyzed across the population between: helping behaviors and perspective taking; sharing behaviors and perspective taking; and positive justice reasoning and perspective taking. Chi-squares were computed between: helping behaviors and positive justice reasoning; and sharing behaviors and positive justice reasoning.[1] Table 2 shows the results of these analyses.

Table 2. Relationship Between Variables in Developmental Observations

	Helping	Sharing	Positive Justice Reasoning
Perspective Taking	$r_{pb} = .01$	$r_{pb} = .24$	$r_{pb} = .22$
Helping			$X^2 = .63$
Sharing			$X^2 + 7.03^*$

*$p < .01$

As Table 2 indicates, only sharing and positive justice reasoning were related significantly. Three packages of snacks was the highest number shared by any subject. Nineteen of the

thirty subjects shared three packages and of these, eighteen scored at Damon's highest levels of reasoning (1A/1B). Helping was not as salient a behavior as sharing, with only nine children offering to help their confederates stack tickets. Of these nine children, seven also shared three packages of snacks.

On the positive justice interview, five children reasoned at the highest level (1B), a level that has been designated by Damon as likely to emerge in children age six or over. Four of these five children scored above the mean in perspective taking.

DISCUSSION

Subjects in Montessori and traditional classrooms, despite their different environments, scored equally well on measures of perspective taking and altruism. Generally, their positive justice reasoning covered similar ranges of maturity and ideas. The Montessori philosophy was not reflected in the superior behavior and reasoning that Maria Montessori would have expected. However, it should be pointed out that the traditional schools included in this study incorporated many aspects of her approach such as heterogeneous age grouping, all day programs, and cognitive instruction. This study focused on aspects such as individualism, independence, and environmental materials. Greater differences might have been observed if Montessori subjects had been compared with those in age-homogeneous play-school programs, Reuter and Yunik (8), Goldner and Murphy (3). Additionally, five-year-old children may not have been sufficiently influenced

by the school setting, despite two years within it, to transfer the usual classroom behavior to an experimental setting. It is also possible that at this age, family norms and role models may be a more powerful influence.

Morever, to the extent that altruistic behaviors and reasoning are developmentally based, the influence of the classroom environment seems to be lessened. For example, in this study there were no significant differences in sharing and helping between Montessori and traditional students, or between males and females. However, females had a tendency to offer more help than males ($p < .10$). Although this difference was not significant, it may show the beginnings of a developmental trend. O'Bryant and Brophy (6) involved fifth grade children in altruism activities similar to those described in this study. Sharing activities found males and females to be equally generous, but the females were significantly more helpful ($p < .02$). A second example from this study that points to developmentally based trends relates to the link between perspective taking and moral judgment. In this study, four of the five children who reasoned at the highest level (1B) also scored above the mean in perspective taking. (It will be recalled that this level is normally observed in children over age six.) Research by Selman (10) and Rubin and Schneider (9) found moral reasoning and perspective taking in children of school age to be significantly related.

The children observed in this study were in the lowest range of perspective taking ability and in the earliest stages

of development of altruism. Observations which showed early, but not yet significant, trends in behavior would likely have been revealed as statistically significant if the subjects had been older, thus confirming the developmental theories of Montessori, Piaget, Kohlberg, and Damon.

Regarding the observed relationships between altruism and positive justice reasoning, Piaget (7) has argued that children's moral behavior is frequently more advanced than their reasoning. Analysis of children who offered help in this research confirms his arguemnt. Kohlberg (4), on the other hand, has argued that moral reasoning must be developed before the corresponding behaviors will be evident. Analysis of children who shared generously in this research confirms Kohlberg's argument. Damon (1) attempts to reconcile these points of view by suggesting that reasoning and behavior may be inconsistent in that each child selects behaviors and reasoning for specific situations. Even subtle differences, Damon says, may add up to an entirely different situations from the child's point of view, so that the child's moral behavior is specific to only one social context at a time. Observation of individual subjects in this study verifies Damon's argument. Two children, for example, did not share generously with their confederates, but felt themselves under pressure from demanding older sisters at home. Another girl was one who gave help to her confederate, but it was less from a desire to assist than from an interest in making a balanced design of the ticket piles.

While developmental influences appear to affect the behavior and reasoning of children more strongly than classroom environment, the structure of this study required that the subjects transfer any learnings from the classroom to a non-related situation. It is possible that within the confines and requirements of the classroom and its schedule that there would be differences in moral reasoning and behavior between the two school types. Further research of an ethnographic nature might uncover different results.

If, as this study indicates, the influence of the school environment and philosophy have little or no effect on moral judgment and behavior, direct intervention and instruction may be requisite if children are to be helped in their moral reasoning and behavior. Age-appropriate activities are necessary in the curriculum that emphasize helping, sharing, and other aspects of altruism.

NOTE

[1]Each variable was analyzed as follows: perspective taking was scored according to mean number right for each subject; helping behaviors were scored based on the subject helping or not helping a confederate; sharing behaviors were scored according to number of snacks shared, but in chi-squares were analyzed above and below the mean; positive justice reasoning (moral reasoning) was analyzed by ascertaining each subject's overall level, then dividing scores above and below the mean for chi-squares.

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ABSTRACT

This study investigated the moral development of five-year-old children in Montessori and traditional preschools. Comparisons were made between school type and across the total population in regard to altruistic behavior, specifically helping and sharing; moral judgement, specifically positive justice reasoning; and cognitive perspective taking. Positive justice reasoning and altruistic behavior were not found to be affected by exposure to a Montessori or traditional school environment. Rather, results indicated that developmental influences alone determined reasoning and behavior, thus confirming developmental theories of moral growth, and suggesting as well that direct intervention or teaching may be more effective than environment in spurring moral growth.